

**SUPPLEMENTAL ENVIRONMENTAL ASSESSMENT  
&**

**FINDING OF NO SIGNIFICANT IMPACT**

**for the**

**Town of Patagonia Wastewater Treatment and Collection Facilities  
Patagonia, Santa Cruz County, Arizona**

**I. Introduction**

This document supplements the *Environmental Assessment for the Town of Patagonia Wastewater Treatment and Collection Facilities* which was prepared by the U.S. Environmental Protection Agency (EPA) in October, 1999 and will replace the Finding of No Significant Impact (FONSI), which was signed on November 22, 1999. The Environmental Assessment (EA) disclosed the potential environmental impacts for the project which proposed to upgrade and expand the wastewater treatment plant and rehabilitate or replace deteriorated sections of the wastewater collection system for the town of Patagonia, Arizona.

The purpose and scope of this Supplemental Environmental Assessment is limited to cataloging the changes that have been made in the design of the project since the original assessment was written and detailing the potential impacts that may occur as a result of those changes. With the exception of the points described in the following sections, the original EA (attached) accurately represents: the project's purpose and need; the analyses of the project's design alternatives, including the alternative of no action and the preferred alternative; and the potential environmental impacts associated with each alternative.

This document will also serve as a Finding of No Significant Impact for the proposed project, including the changes specified below.

**II. Brief Description and History of the Project**

The town of Patagonia initiated planning to improve the quality of its wastewater collection and treatment services soon after a Notice of Violation was issued by the EPA on November 19, 1996 establishing the shortcomings of the existing plant and its

failure to consistently meet National Pollutant Discharge Elimination System (NPDES) permit limits.

The existing treatment plant is beyond its design life and operates below treatment demands during high flow periods. The existing treatment process is incapable of achieving total nitrogen removal as is required by the Town's pending Arizona's Aquifer Protection Permit (APP) and anticipated new NPDES permit limits. The existing system also has limited sludge digester capacity, limited sludge wasting ability, and is incapable of withstanding shock loads. The chlorination/dechlorination unit is inadequate, resulting in occasional violation of NPDES chlorine residual limit. These treatment limitations result in repeated NPDES permit violations and unacceptable levels of contaminants being discharged to Sonoita Creek. Furthermore, the treatment plant capacity has often been exceeded during major storm events.

After consideration of the environmental, technical and financial parameters involved, an upgrade and expansion of the town's wastewater treatment plant, and improvements to the collection system were proposed and an Environmental Assessment was prepared (*Environmental Assessment for the Town of Patagonia Wastewater Treatment and Collection Facilities, October, 1999* – attached). The EA presented three alternatives for the collection and wastewater treatment system's upgrade, including no action. The preferred alternative (B) proposed a treatment plant upgrade on the existing site and improvements to the collection system. Five sub-alternative treatment technologies were evaluated under Alternative B, and the environmental impacts of all five were considered to be equivalent in the EA. Patagonia chose the conventional oxidation ditch as the preferred technology.

The town of Patagonia has since reconsidered their options and decided that a conventional extended aeration plant, which was one of the five equivalent sub-alternatives analyzed in the original EA, would better fit their needs. The design capacity of the project under the new proposal would not be changed.

The treatment plant improvements would include: 1) installation of a new conventional extended air treatment system that would improve treatment reliability, simplify operation, allow for nutrient removal, and accommodate current and anticipated flows, and 2) importation of sufficient fill to raise the base elevation of the facility three feet above the 100-year flood plain, minimizing the potential for flood damage to the facility and the possibility of untreated or partially treated sewage entering Sonoita Creek during floods.

The collection system improvements consist of the rehabilitation and/or replacement of deteriorated sections of the wastewater collection system (approximately 5,500 linear feet [lf] out of 21,000 lf of existing collection lines) using either open trench replacement or in situ repair.

With the exception of the few modifications listed below, the currently proposed extended aeration plant design will not augment the environmental impacts outlined in the original EA.

### **III. Direct and Indirect Impacts**

#### **A. Flood Plains**

The originally planned oxidation ditch design was to be located at the elevation of the treatment plant that is now in operation, within the 100-year flood plain (according to the 1980 U.S. Department of Housing and Urban Development Flood Insurance Rate Map for the project area). The current preferred design plan calls for the importation of fill to raise the site of the new facility to an elevation three (3) feet above the 100-year flood plain. This should minimize the potential for flood damage to the facility and the possibility of untreated or partially treated sewage entering Sonoita Creek during floods. The potential for flooding still exists during the construction period, but this impact can be avoided by scheduling the construction outside of the area's short monsoon season.

#### **B. Air Quality/Odors**

Importation and application of fill dirt (approximately 7500 cubic yards) will create temporary fugitive dust emissions due to the movement of heavy equipment and the unloading and compaction of the fill. These emissions could impact ambient  $PM_{10}$  concentration but the impact would be temporary and, with standard dust suppression techniques utilized, not significant. Fill importation will also temporarily increase ambient levels of  $PM_{2.5}$  and nitrogen oxides due to increased vehicular emissions. These increased emissions are not expected to create a significant impact on air quality.

#### **C. Historic, Prehistoric, Architectural, Archaeological and Cultural Sites**

Six Indian tribes with cultural affiliation in south central Arizona were consulted and provided with information on known prehistoric and historic sites located in the project area as well as the proposed actions to be taken.

None of the three prehistoric sites located in or near the Project Area that were identified by the Arizona State Museum are expected to be impacted by the proposed project.

The original EA noted three (3) historic buildings in the town of Patagonia, and implied that, in accordance with an Arizona State Museum recommendation, a monitoring program will be established to coincide with all ground disturbing activities. There are actually sixteen (16) historic properties recorded in Patagonia, but because all ground disturbing activities will be limited to the town's street and alley rights of way and will not impact on any historic properties, the Arizona State Historic Preservation Officer has determined that a monitoring program is unnecessary. However, standards of practice as they are defined in Section 106 of the National Historic and Preservation Act of 1966, as amended through 2000 will be maintained, and if previously unidentified cultural resources are discovered

during construction, the contractor will stop work immediately at the location and take all reasonable steps to secure the preservation of those features and the SHPO will be notified.

#### **D. Receiving Waters**

Between January 1997 and October 1998 Patagonia violated its phosphorus limit for 21 of the 22 months for which Discharge Monitoring Reports were administered to the Arizona Department of Environmental Quality. At the time the original Environmental Assessment was prepared, the authors were operating under the assumption that due to a high background phosphorus concentrations, phosphorus limits would be excluded from future NPDES permit requirements and that therefore treatment for phosphorus would not be a priority. The current NPDES permit does not allow an exemption for phosphorus; it does, however, include a relaxation of the phosphorous standard for the plant's effluent from 0.5 to 3.2 mg/l. The new design should be able to consistently meet the new standard for phosphorus.

#### **E. Solid Waste**

The use of the currently proposed conventional, extended air design for treatment will likely create more sludge than the originally planned oxidation ditch. But the new design will include a belt press for enhanced sludge dewatering which will lessen the overall volume and weight of the wastes, making the process more efficient and helping to mitigate the impact of solid waste disposal. Solid wastes will still be treated in an aerobic digester before dewatering and will be disposed of at the town landfill.

### **IV. Environmental Consequences and Conditions**

The changes to the proposed project will not create any significant impacts to the environment or human population. The proposed changes are limited to the footprint of both the existing and originally proposed plants, and will likely reduce future impacts by raising the site out of the 100-year flood plain and more efficiently treating for nutrients.

Therefore, the EPA, after considering a wide range of regulatory, environmental and socio-economic factors, in compliance with the National Environment Policy Act, has identified no significant impacts to the environment resulting from the implementation of the proposed project.

### **V. Public Review**

The original EA is on file, and is available for public inspection at the EPA Region 9 office in San Francisco, California. Copies of the original and supplemental Environmental Assessments are also available for public review in Patagonia at the

Town Clerk's Office, 310 McKeown Avenue, (520) 394-2229, and at the Public Library, 346 Duquesne, (520) 394-2010. In addition, the EA and this document will be posted on the Border Environment Cooperation Commission (BECC) website at <http://www.cocof.org> and on the EPA website at <http://www.epa.gov/region09/border>.

Interested persons, including those who disagree with this proposal, may submit comments to EPA Region 9 within 30 calendar days from the date this document is issued. No administrative action will be taken on this proposed project prior to the expiration of this comment period, which ends December 27, 2002. Comments, via letter, fax or email, should be sent to Tom Konner at the address listed below.

Tom Konner (WTR-4)  
U.S. EPA, Region 9  
75 Hawthorne Street  
San Francisco, CA 94105  
Telephone: (415) 972-3408  
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After EPA assesses any comments received, those comments, EPA's responses, and this Finding of No Significant Impact will be forwarded to the Regional Administrator for review and signature. If the Regional Administrator signs this FONSI, it will not be re-circulated for review but will be available to any individual upon request.

## **FINDING**

After review of the EA and any comments received, EPA has determined that the proposed project will not have a significant impact on the environment and that an Environmental Impact Statement will not be prepared for this project.

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Wayne Nastri  
Regional Administrator

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Date